The Commonwealth of Massachusetts
Executive Office of Health and Human Services
Department of Public Health
William A. Hinton State Laboratory Institute
305 South Street, Jamaica Plain, MA 02130

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SECRETARY

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COMMISSIONER

02/17/2010

Michael Pirrello
Assistant District Attorney, Norfolk County

Dear ADA Pirrello,

Enclosed is the information you requested in regards to Commonwealth vs. [redacted] Included are copies of the following:

1. Drug Analysis Laboratory Receipt.
2. Curriculum Vitae for Annie Dookhan.
3. Control Cards with analytical results for samples # [redacted]
4. Analysis sheets with custodial chemist's hand notations and test results.
5. Instrument, Reagent and Balance Model and Serial #.
6. Guidelines of the recommendations for SWGDRUG Method of Analysis.

Annie Dookhan was the custodial chemist and performed the testing and net weight for this sample.

If you have any questions about these materials, please call me at the number below.

Sincerely,

Annie Khan (Dookhan)
Chemist II
Drug Analysis Lab
Jamaica Plain, MA. 02130
(617) 983-6631
Annie.Khan@state.ma.us

The Commonwealth of Massachusetts
Executive Office of Health and Human Services
Department of Public Health
State Laboratory Institute

Boston Drug Laboratory
Tel (617) 983-6622
Fax (617) 983-6625

Boston Hours
8:00 – 11:00
2:00 – 4:00

Amherst Drug Laboratory
Tel (413) 545-2601
Fax (413) 545-2608

Amherst Hours
9:00 – 12:00
1:00 – 4:00

DRUG RECEIPT

City or Department: WRENTHAM Police Reference No.: [redacted]

Name and Rank of Submitting Officer: ELLIS - PATROLMAN

Defendant(s) Name (last, first, initial)

[redacted]

Description of Samples	*To be completed by Lab Personnel* Gross Weight	Lab Number
GREEN LEAFY VEG MATTER	18.49g	[redacted]

Received by: [signature] Date: 6-2-10

Curriculum Vitae

Annie Khan (Dookhan)

Education:
University of Massachusetts, Boston, Ma, Master of Science in Chemistry.
University of Massachusetts, Boston, Ma, Bachelor of Science in Biochemistry.

Experience:
2003 – present
Chemist I, II, Massachusetts Department of Public Health, Drug Analysis Laboratory

*Completed six-week training course conducted by senior staff within the Department of Public Health, Drug Analysis Laboratory.
*Appointed Assistant Analyst by Assistant Commissioner of Public Health, 2004.
*Responsible for the identification of illicit drugs to determine violations of harmful and narcotic drug laws.
*Trained in the use of complex analytical instrumentation, microscopes and balances for the purpose of drug analysis.
*Maintenance and repairs of all analytical instruments.
*Responsible for the Quality Control of all analytical instruments, reagents and controls/standards.
*Responsible for the Quality Control/Quality Assurance program for the drug lab.
*Notary Public.
*Qualified as an expert witness in Massachusetts Courts and U.S. District Court

2001 – 2003
QC Analyst I, II, UMMS-Massachusetts Biologic Laboratory, QC Material Control

*Completed proficiency training conducted by a member of the staff within the MLB Quality Control and Quality Assurance Department.
*Method Development for creating new techniques and enhancing vaccines for the QC Dept. and FDA.
*Writing, revising and reviewing Standard Operating Procedures (SOPs).
*Trained and supervised new chemists and interns for the department.
*Routine QC testing of products for the FDA.
*Trained in the use of complex analytical instrumentation, and balances for the purpose of QC analysis for product and validation projects.
*Calibration, preventive maintenance, QC and QA of analytical instrumentation.
*Complete testing of chemicals for Vendor Validation Project for the FDA.
*Compendial testing and interpretation of the USP, ACS, FCC, AOAC, Merck Index, PDR, etc.

Additional Training:
Dept. of Justice – Forensics Professionals. (numerous trainings)
GLP/GMP course with Massachusetts Biologic Laboratory.
QC/QA training according to FDA Codes and Regulations.
GC and GC/MS courses with Agilent Technologies and Restek.
HPLC course with Waters Cooperation.
FTIR course with Spectros.
TOC training with MBL and Sievers.

Association:
American Chemical Society (ACS)
Northeastern Association of Forensics Science (NEAFS)

No. [redacted]

Date Analyzed: 09-03-10

City: Wrentham Police Dept.

Officer: P.O. SCOTT ELLIS

Def: [redacted]

Amount:

Subst: VM

No. Cont: ~~1~~ 4 Cont: pb

Date Rec'd: 06/02/2010

No. Analyzed: 1

Gross Wt.: 18.49

Net Weight:

Tests: 3000

mic(+) macro(+) duq(+)

Prelim:

Findings: Marijuana.

Gross wt of cups = 14.1

Gross wt - pb = 4.2

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04/08/2011

Microscope:
Reichert StereoStar Zoom
Serial # BD289352

Balance:
Ohaus N1D110
Serial# 1125493269

Reagent: Duquenois Levine

Vanillin, Fisher Scientific, Lot # 072297

Acetaldehyde, Acros Organic, Lot # A0244040

Alcohol Reagent, JT Baker, Lot # H26750

Annie Khan

Approved October 2003

PART III B
Methods of Analysis/Drug Identification

SECTION 1: INTRODUCTION

The purpose of PART III B is to recommend minimum standards for the forensic identification of commonly seized drugs. It is recognized that the correct identification of a drug or chemical depends on the use of an analytical scheme based on validated methods and the competence of the analyst. SWGDRUG requires the use of multiple uncorrelated techniques. It does not discourage the use of any particular method within an analytical scheme and it is accepted that unique requirements in different jurisdictions may dictate the actual practices followed by a particular laboratory.

SECTION 2: CATEGORIZING ANALYTICAL TECHNIQUES

2.1 Techniques for the analysis of drug samples may be classified into three categories based on their discriminating power. Table 1 provides examples of these techniques listed in order of decreasing discriminating power from A to C.

Table 1: Categories of Analytical Techniques

Category A	Category B	Category C
Infrared Spectroscopy	Capillary Electrophoresis	Color Tests
Mass Spectrometry	Gas Chromatography	Fluorescence Spectroscopy
Nuclear Magnetic Resonance Spectroscopy	Ion Mobility Spectrometry	Immunoassay
Raman Spectroscopy	Liquid Chromatography	Melting Point
	Microcrystalline Tests	Ultraviolet Spectroscopy
	Pharmaceutical Identifiers	
	Thin Layer Chromatography	
	Cannabis only: Macroscopic Examination Microscopic Examination	

SECTION 3: IDENTIFICATION CRITERIA

SWGDRUG recommends that laboratories adhere to the following minimum standards:

3.1 When a validated Category A technique is incorporated into an analytical scheme, then at least one other technique (from either Category A, B or C) must be used.

3.1.1 This combination must identify the specific drug present and must preclude a false positive identification.

3.1.2 When sample size allows, the second technique should be applied on a separate sampling for quality assurance reasons. When sample size is limited, additional measures should be taken to assure that the results correspond to the correct sample.

3.1.3 All Category A techniques must have data that are reviewable.

3.2 When a Category A technique is not used, then at least three different validated methods must be employed.

3.2.1 These in combination must demonstrate the identity of the specific drug present and must preclude a false positive identification.

3.2.2 Two of the three methods must be based on uncorrelated techniques from Category B.

3.2.3 A minimum of two separate samplings should be used in these three tests. When sample size is limited, additional measures should be taken to assure that the results correspond to the correct sample.

3.2.4 All Category B techniques must have reviewable data.

3.3 For the use of any method to be considered of value, test results must be considered "positive." While "negative" test results provide useful information for ruling out the presence of a particular drug or drug class, these results have no value toward establishing the forensic identification of a drug.

3.4 In cases where hyphenated techniques are used (e.g. gas chromatography-mass spectrometry, liquid chromatography-diode array ultraviolet spectroscopy), they will be considered as separate techniques provided that the results from each are used.

3.5 Cannabis exhibits tend to have characteristics that are visually recognizable. Macroscopic and microscopic examinations of cannabis will be considered, exceptionally, as uncorrelated techniques from Category B when observations

include documented details of botanical features. Additional testing must follow the scheme outlined in sections 3.1 or 3.2.

3.5.1 For exhibits of cannabis that lack sufficient observable macroscopic and microscopic botanical detail (e.g. extracts or residues), Δ^9-tetrahydrocannabinol (THC) or other cannabinoids must be identified utilizing the principles set forth in sections 3.1 and 3.2.

3.6 Examples of reviewable data are

3.6.1 printed spectra, chromatograms and photographs or photocopies of TLC plates

3.6.2 contemporaneous documented peer review for microcrystalline tests

3.6.3 recording of detailed descriptions of morphological characteristics for cannabis (only)

3.6.4 reference to published data for pharmaceutical identifiers.

SECTION 4: COMMENT

These recommendations are minimum standards for the forensic identification of commonly seized drugs. However, it should be recognized that they may not be sufficient for the identification of all drugs in all circumstances. Within these recommendations, it is up to the individual laboratory's management to determine which combination of analytical techniques best satisfies the requirements of its jurisdiction.